

CLAIMS:

1. A method for electroplating a cylindrical inside surface of a work-piece extending substantially over a semi-circle, with an electrolyte being conveyed from a bath in a circulation through a gap between the inside surface and a revolving guide means, characterized in that the electrolyte is conveyed with the help of the guide means (6) immersed only partly in the bath (8) in the circumferential direction through the gap (9) between the guide means (6) and the work-piece (3) guided outside of the bath (8).
2. A method as claimed in claim 1, characterized in that on the inlet side of the gap (9) the electrolyte flows against the guide means (6) in the direction of the gap (9).
3. A method as claimed in claim 1 or 2, characterized in that the revolving direction of the guide means (6) and thus the conveying direction for the electrolyte through the gap (9) is changed repeatedly.
4. A method as claimed in one of the claims 1 to 3, characterized in that the work-piece (3) is held in a displaceable manner above the bath level in the direction of the axis of its cylindrical inside surface (4).
5. An apparatus for performing the method for electroplating a cylindrical inside surface of a work-piece extending substantially over a semi-circle in accordance with one of the claims 1 to 4 with a bath tank, with a fixing device for the work-piece and with a revolving guide means between which a gap for the conveyance of the electrolyte remains between guide means and the inside surface of the work-piece, characterized in that the guide means immerses only partly into the bath (8) and is used as the conveyor

for the electrolyte and that the fixing device (2) receives the work-piece (3) in a working position above the bath level.

6. An apparatus as claimed in claim 5, characterized in that the revolving speed of the guide means (6) is adjustable.
7. An apparatus as claimed in claim 5 or 6, characterized in that at least one nozzle (11) facing against the guide means (6) and the gap (9) for an electrolyte flow is provided on the inlet side of the gap (9) between the guide means (6) and the inside surface (4) of the work-piece (3).
8. An apparatus as claimed in one of the claims 5 to 7, characterized in that the fixing device (2) forms a sliding guide means (5) for the work-piece (3) in the direction of the revolving axis of the guide means (6).
9. An apparatus as claimed in one of the claims 5 to 8, characterized in that the guide means (6) has a profiled surface.
10. An apparatus as claimed in one of the claims 5 to 9, characterized in that the guide means (6) is arranged as a bipolar electrode between the work-piece (3) which is switched as a cathode and an anode (10) which is arranged in the bath (8).
11. An apparatus as claimed in one of the claims 1 to 10, characterized in that the guide means (6) is displaceable in the radial direction relative to the fixing device (2) for the work-piece (3).
12. An apparatus as claimed in one of the claims 1 to 11, characterized in that the guide means (6) consists of a rotor which is parallel to the axis of the inside surface (4) of the work-piece (3).

13. An apparatus as claimed in one of the claims 1 to 12, characterized in that the guide means (6) consists of a support for an electrolyte-permeable intermediate layer (20) which fills the gap (9) at least partly.
14. An apparatus as claimed in claim 13, characterized in that the surface of the intermediate layer (20) consist of a fabric (21) resting on the inside surface (4) of the work-piece (3).
15. An apparatus as claimed in claim 13, characterized in that the intermediate layer (20) consists of a brush trimming (22).
16. An apparatus as claimed in claim 15, characterized in that the electrically conductive bristles of the brush trimming (22) end at a radial distance from the inside surface (4) of the work-piece.
17. An apparatus as claimed in claim 15, characterized in that the bristles of the brush trimming (22) which rest on the inside surface (4) of the work-piece (3) consist of an electrically insulating material.
18. An apparatus as claimed in one of the claims 1 to 17, characterized in that the guide means (6) comprise radial pass-through openings (23) for the electrolyte.